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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,438	07/12/2002	Shahram Mihan	DB050575/Doe	3670

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CONNOLLY BOVE LODGE & HUTZ, LLP
1220 N MARKET STREET
P O BOX 2207
WILMINGTON, DE 19899

EXAMINER

LU, C CAIXIA

ART UNIT PAPER NUMBER

1713

DATE MAILED: 06/18/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/069,438

Applicant(s)

MIHAN ET AL.

Examiner

Caixia Lu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 13-27 is/are pending in the application.
- 4a) Of the above claim(s) 18-20 and 27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 13-17 and 21-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> . | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I, Claims 1, 13-17 and 21-26 in Paper No. 8 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 13-17 and 21-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brant et al. (WO 93/12151).

The instant claims are directed to a ethylene/ α -olefin copolymer having Mw/Mn of 10 or less, density of 0.85-0.95 g/cm³, Mn of above 150,000 and a comonomer composition distribution breadth index (CDBI) above 70%. Claim 23 further limits the CDBI to be above 90%.

Brant teaches ethylene/ α -olefin copolymer having Mw/Mn of 2-4, density of 0.85-0.95 g/cm³, Mw of above 30,000-1,000,000 and CDBI of above 70% (page 5, line 27 to page 5, line 2; and page 12, lines 35-39). Although Brant does not expressly teach the CDBI to be above 90%, a skilled artisan would have expected Brant's CDBI to be

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similar to that of the instant claims because olefin copolymer prepared in the presence of a metallocene catalyst are known for its narrow composition distribution, i.e., high percentage of CDBI.

Therefore, it would have been obvious to a skilled artisan at the time the invention was made to employ Brant's teaching to provide a ethylene copolymer with a high molecular weight such as higher than 300,000 and CDBI of above 70% because such is within the generic disclosure of the reference and all of the embodiments of the reference are expected to work and in the absence of any showing of criticality and unexpected results.

4. Claims 1, 13-17 and 21-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holtcamp et al. (US 6,476,166 B1).

Holtcamp teaches a ethylene/ α -olefin copolymer having Mw/Mn of 1.5-4, density of 0.86-0.97 g/cm³, CDBI of 50-100%, and melt index of 0.01 to 100 dg/min (col.10, lines 46-62; and col. 11, lines 29-57). The Mn of Holtcamp's copolymer is expected to be above 150,000 when the melt index is near lower end of the melt index range of 0.01 to 100 dg/min because the melt index is controlled by the molecular weight of the polymer: the higher Mn, the lower the melt index.

Therefore, it would have been obvious to a skilled artisan at the time the invention was made to employ Holtcamp's teaching to provide a ethylene copolymer with Mn to be higher than 150,000 and CDBI of above 70% because such is within the generic disclosure of the reference and all of the embodiments of the reference are

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expected to work and in the absence of any showing of criticality and unexpected results.


Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Crowther et al. (US 6,388,115 B1) and Jacobsen et al. (US 6,506,866 B2) are also considered as art of interests.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Caixia Lu whose telephone number is (703) 306-3434. The examiner can normally be reached on 9:00 a.m. to 3:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (703) 308-2450. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1193.


Caixia Lu, Ph. D.
Primary Examiner
Art Unit 1713

CL
June 14, 2003